

**Notice of Allowability**

Application No.

10/643,208

Examiner

Gene N Auduong

Applicant(s)

PROEBSTING ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed August 13, 2003.
2. ☒ The allowed claim(s) is/are 112-129.
3. ☒ The drawings filed on 13 August 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date see action page
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
**GENE N. AUDUONG**  
**PRIMARY EXAMINER**

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 08-18-03, 12-17-03, 12-19-03, 06-01-04 and 08-13-04 is being considered by the examiner.

***Allowable Subject Matter***

2. Claims 122-129 are allowed.
3. The following is an examiner's statement of reasons for allowance: The prior art does not teach or fairly disclose an integrated circuit system having a first integrated circuit chip that is configured to generate data and strobe signals at outputs thereof; and a second integrated circuit chip that receives the data and strobe signals and latches a buffered version of the data signal in-sync with leading edges of a pair of complementary strobe signals that are derived from a delayed timing signal, the second integrated circuit chip having a delay device therein that comprises a digital delay line having a plurality of injection ports, the digital delay line configured to generate the delayed timing signal by adding at least a percent-of-clock period delay to a timing signal that is derived from the strobe signal and accepted at an enabled one of the plurality of injection ports of the digital delay line, and further configured to be responsive to an injection control signal having a value that sets a length of the delay by specifying a location of the enabled one of the plurality of injection ports; or a DDR memory controller (second chip) that receives the DDR data signal and the DQS strobe signal and captures a buffered version of the DDR data signal at a bandwidth of greater than about 200 or 266 Mwords/sec and in-sync with leading edges of a pair of complementary strobe signals that are derived from a delayed DQS strobe signal, said DDR memory controller having a digital delay line therein that is configured to generate the delayed DQS strobe signal by adding at least a percent-of-clock

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period delay to a buffered version of the received DQS strobe signal, and is further configured to be responsive to a multi-bit injection control signal having a value that sets a length of the delay.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### *Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene N Auduong whose telephone number is (571) 272-1773.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GA  
September 3, 2004



Gene N Auduong  
Primary Examiner  
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